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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER				
ORLANDO, AMBER ROSE				
ART UNIT		PAPER NUMBER		
1797				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/510,344

Applicant(s)

OHNO, KAZUSHIGE

Examiner

AMBER ORLANDO

Art Unit

1797

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 October 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-14 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 06 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date 10/10/2008, 10/10/2008
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

This action is in response to the correspondence filed on 10/10/2008.

Claims 1, 2, and 14 have been amended.

Claims 1-14 have been rejected.

Claims 1-14 have been examined and are pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/10/2008 has been entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-3, 6, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253 in view of Pitcher, Jr. US 4,329,162, Takahashi et al. 6,261,982 and Park et al. 6,214,227.

Regarding claim 1, the Ichikawa et al. reference discloses a honeycomb filter for purifying exhaust gases comprising: a columnar body comprising porous ceramic and having a plurality of through holes, extending in parallel with one another in a length direction of the columnar body, the columnar body having a wall portion interposed between the through holes and configured to filter particulates in exhaust gases; and a plurality of plugs filling one of the through holes at one end of the columnar body and filling one of the through holes at the other end of the columnar body (figure 4, object 1, and column 1, lines 19-32); wherein the columnar body has a bending strength F_b (MPa), and the plurality of plugs has a length L (mm) (Table 1). The reference does not disclose the bending strength being a three-point bending strength. The reference does not disclose the columnar body and the plurality of plugs are formed such that the bending strength F_b (MPa) and the length L (mm) are adjusted to satisfy the relationship of $F_b \times L \geq 30$.

The Takahashi et al. and Park et al. references disclose the three-point bending strength being higher than 8.0 MPa (Takahashi, Table 1 and column 3, lines 52-54 and Park et al. claim 1).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the three-point bending strength being higher than 8.0 MPa (Takahashi, Table 1 and column 3, lines 52-54 and Park et al. claim 1) because this provides the necessary strength to the apparatus while maintaining permeability.

The Pitcher, Jr. reference discloses the plug lengths of 9.5-13mm (column 9, lines 24-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the plug lengths of 9.5-13mm and therefore a bending strength $F\alpha$ (MPa) of said honeycomb filter for purifying exhaust gases and a length L (mm) of said plug in the length direction of the through hole satisfy the relationship of $F\alpha \times L \geq 30$ (Pitcher, Jr. column 9, lines 24-27) because this allows the filter to have the ability to block specific passages and therefore filter the gas.

For claim 2, the Ichikawa et al. reference discloses a bending strength $F\alpha$ (MPa) of said honeycomb filter of (Table 1). The reference does not disclose the bending strength being a three point bending strength and a bending strength $F\alpha$ (MPa) and the length L (mm) satisfy the relationship of $30 \leq F\alpha \times L \leq 200$.

The Takahashi et al. reference discloses the three-point bending strength being higher than 8.0 MPa (Takahashi, Table 1 and column 3, lines 52-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the three-

point bending strength being higher than 8.0 MPa (Takahashi, Table 1 and column 3, lines 52-54) because this provides the necessary strength to the apparatus while maintaining permeability.

The Pitcher, Jr. reference discloses the plug lengths of 9.5-13mm (column 9, lines 24-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the plug lengths of 9.5-13mm and therefore a bending strength $F\alpha$ (MPa) of said honeycomb filter for purifying exhaust gases and a length L (mm) of said plug in the length direction of the through hole satisfy the relationship of $30 \leq F\alpha \times L \leq 200$ (Pitcher, Jr. column 9, lines 24-27) because this allows the filter to have the ability to block specific passages and therefore filter the gas.

For claim 3, the Ichikawa et al. reference discloses a catalyst being provided in the columnar body (column 7, lines 58-60).

For claim 6, the Ichikawa et al. reference discloses a catalyst provided in the columnar body (column 7, lines 58-60).

For claim 13, the Ichikawa et al. reference discloses the columnar body comprising a plurality of porous ceramic members and an adhesive layer comprising a sealing material joining the plurality of porous ceramic members (figure 1b, object 12 and 8).

For claim 14, the Ichikawa et al. reference discloses a bending strength $F\alpha$ (MPa) of said honeycomb filter of (Table 1). The reference does not disclose the bending

strength being a three point bending strength and a bending strength $F\alpha$ (MPa) and the length L (mm) satisfy the relationship of $30 \leq F\alpha \times L \leq 200$.

The Takahashi et al. reference discloses the three-point bending strength being higher than 8.0 MPa (Takahashi, Table 1 and column 3, lines 52-54).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the three-point bending strength being higher than 8.0 MPa (Takahashi, Table 1 and column 3, lines 52-54) because this provides the necessary strength to the apparatus while maintaining permeability.

The Pitcher, Jr. reference discloses the plug lengths of 9.5-13mm (column 9, lines 24-27).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the plug lengths of 9.5-13mm and therefore a bending strength $F\alpha$ (MPa) of said honeycomb filter for purifying exhaust gases and a length L (mm) of said plug in the length direction of the through hole satisfy the relationship of $30 \leq F\alpha \times L \leq 200$ (Pitcher, Jr. column 9, lines 24-27) because this allows the filter to have the ability to block specific passages and therefore filter the gas.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 1 above, and further in view of Shimoda et al. US 5,725,618.

For claim 4, the Ichikawa et al reference does not disclose the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process.

The Shimoda et al. reference discloses the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (column 2, lines 41-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (Shimoda et al. column 2, lines 41-52) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 1 above, and further in view of Merry US 5,171,341.

For claim 5, the Ichikawa et al. reference does not disclose the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated gases.

The Merry reference discloses the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated gases (column 9, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated gases (Merry, column 9, lines 1-5) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 2 above, and further in view of Shimoda et al. US 5,725,618.

For claim 7, the Ichikawa et al reference does not disclose the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process.

The Shimoda et al. reference discloses the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (column 2, lines 41-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (Shimoda et al. column 2, lines 41-52) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 3 above, and further in view of Shimoda et al. US 5,725,618.

For claim 8, the Ichikawa et al reference does not disclose the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process.

The Shimoda et al. reference discloses the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (column 2, lines 41-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (Shimoda et al. column 2, lines 41-52) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 6 above, and further in view of Shimoda et al. US 5,725,618.

For claim 9, the Ichikawa et al reference does not disclose the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process.

The Shimoda et al. reference discloses the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (column 2, lines 41-52).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body uses a gas flow to remove the particulates collected and accumulated in the wall portion by a back washing process (Shimoda et al. column 2, lines 41-52) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 2 above, and further in view of Merry US 5,171,341.

For claim 10, the Ichikawa et al. reference does not disclose the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases.

The Merry reference discloses the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases (column 9, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases (Merry, column 9, lines 1-5) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 3 above, and further in view of Merry US 5,171,341.

For claim 11, the Ichikawa et al. reference does not disclose the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases

The Merry reference discloses the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases (column 9, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases (Merry, column 9, lines 1-5) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. US 6984253, Pitcher, Jr. US 4,329,162 Takahashi et al. 6,261,982 and Park et al. 6,214,227 as applied to claim 6 above, and further in view of Merry US 5,171,341.

For claim 12, the Ichikawa et al. reference does not disclose the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases.

The Merry reference discloses the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases (column 9, lines 1-5).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the Ichikawa et al. reference to include the columnar body allows heated exhaust gases to flow and removes the particulates collected and accumulated in the wall portion by the heated exhaust gases (Merry, column 9, lines 1-5) because this prevents the particulate filter from being clogged with accumulated particulates and therefore reducing the exhaust's resistance.

Response to Arguments

1. Applicant's arguments filed 12/28/2007 have been fully considered but they are not persuasive.
2. Applicant's arguments with respect to claim 1 (with regards to the three-point bending strength) have been considered but are moot in view of the new ground(s) of rejection.

2. For claim 1, the applicant also argues that the Pitcher reference "does not teach or suggest the relationship between the bending strength of the honeycomb filter and the length of the plugs.
3. The examiner agrees. The Pitcher reference in combination with the Ichikawa Takahashi et al. and Park et al. references teach a honeycomb columnar body, the columnar body and the plurality of plugs are formed such that the three point bending strength $F\alpha$ (MPa) and the length L (mm) are adjusted to satisfy the relationship of $F\alpha \times L \geq 30$

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMBER ORLANDO whose telephone number is (571)270-3149. The examiner can normally be reached on Mon.-Thurs. (6:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on (571) 272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AO

/Walter D. Griffin/
Supervisory Patent Examiner, Art Unit 1797